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ABSTRACT

Opponents of school choice argue that economically advantaged families will get the best schools, and socioeconomic and racial segregation will only increase. If choice allows better matching of child to school, then parent information levels can critically affect the outcome. Very few data are available that directly confirm the presence or absence of information inequalities in school choice programs; most studies infer parental knowledge from their data. One exception to this lack of direct data about parental knowledge comes from the Alum Rock district (California) study of school choice in the 1970s. A fresh examination of the original report indicates that in the first 2 months of the program, there was mixed evidence of informational inequalities. At some time prior to the 14th month, parents became approximately equal in their knowledge about the choice program, regardless of their ethnicity, income, or education. The original evaluation reported informational inequalities, based on one of three questions, after pooling interviews from all parents. Two other questions probing parents' information levels yielded no significant differences among parents except that the Spanish-speaking Mexican Americans were more knowledgeable than others. Concerned about the validity of these Spanish-language interviews, the original evaluators disregarded the data on the Spanish-speaking parents. However, their justification does not seem adequate. Reinstating the Spanish-speaking data, this reassessment of the original evaluation suggests that, given comparable demographics and comparable information dissemination efforts, less educated and minority parents can become as knowledgeable as any other on such basic questions as existence of school choice programs, and transfer and transportation rights under the program. (HTH)

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Parents and Their Informational Resources: A Reassessment of Findings From Alum Rock

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Parents and Their Informational Resources:
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ABSTRACT

Opponents of education choice worry that choice plans will benefit only economically advantaged families. One reason is their better access to information. With better information, they will identify and choose more select schools. Thus, the argument goes, they will get the best schools, and socio-economic segregation will increase. If correlated to socio-economic status, racial segregation will also increase.

This paper reviews both the theoretical assumptions and the research base for this argument. Theoretically, if choice allows better matching of child to school, or an opportunity for minority parents to select more integrated schools, then parent information levels can critically affect the outcome. Under most other theoretical assumptions, it is not clear that information levels will affect outcome.

There are very little data available that directly confirms the presence or absence of information inequalities in school choice programs. Most studies rely on data about choice of schools, and infer parental knowledge from these data. One exception to the lack of direct data about parental knowledge comes from the Alum Rock study of school choice in the 1970s. Based on a fresh examination of the original report, this paper concludes that in the first two months of the program, there was mixed evidence of informational inequalities. At some time prior to the fourteenth month, parents became approximately equal in their knowledge about the choice program, regardless of their ethnicity, income or education.

The original evaluation reported informational inequalities, based on one of three questions, after pooling interviews from all parents (including controls and those not yet entitled to a choice of schools). Two other questions probing parents' information levels yielded no significant differences among parents except that the Spanish speaking Mexican Americans were more knowledgeable than others, not less. The original evaluators were concerned about the validity of the Spanish language interview and disregarded the data on the Spanish speaking parents. This paper suggests reasons for accepting the results of the Spanish interview.

The paper concludes that, given comparable demographics and comparable information dissemination efforts, less educated and minority parents can become as knowledgeable as any other on such basic questions as existence of a program, transfer rights and transportation rights.

Working papers are intended to promote the exchange of ideas among researchers and policy makers. The views are those of the author, and no official support by the U.S. Department of Education is intended or should be inferred.

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Parents and Their Informational Resources:
A Reassessment of Findings From Alum Rock

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Opponents of education choice worry that choice will benefit only better educated, economically advantaged students and their families. One supposed advantage for these families is their better access to information necessary to make appropriate choices. With better information, they will identify and choose more select schools. Thus, the argument goes, they will exacerbate the tendency of schools to skim the best and the brightest. Socio-economic segregation will increase, according to this scenario, and to the extent that socio-economic status is related to race, racial segregation will increase. This paper analyzes and critiques the theory supporting this view. It then re-analyzes a major empirical test of the theory, the classic experiment with choice in Alum Rock, California (a separate school district within the city of San Jose).

Most analysts assume that any informational inequalities will produce unequal outcomes. This is not necessarily so. Much depends on how a parent's choice of school affects a child's education. Theoretically, if choice allows better matching of child to school, or an opportunity for minority parents to select more integrated schools, then parent information levels can critically affect the outcome. Under most other theoretical assumptions, it is not clear that inequality in information levels will produce inequality in outcome.

Some theories predict that choice will improve either school responses or parents' interest in education. First among these, and widely prevalent, is the view that choice will do something to schools. Usually, under this view, choice will give parents more control over schools, because, to succeed, schools and teachers must be more responsive to parents. This will foster competition among schools which will stimulate them all to improve their programs. The improvements, as this theory goes, will then lead to improved academic and other outcomes for all.

Also popular is the theory that choice will do something to parents. The responsibility of choosing will stimulate new parent interest in their children's formal educational activities and this interest in turn will lead to behavioral changes that will directly affect academic outcomes. Or choice will reduce feelings of powerlessness among parents, and this in turn will lead to improved academic and other outcomes.

Under theories based on the effect choice has on either schools or parents, information can be key in some circumstances. For example, if only a small number of parents are knowledgeable, and there are a large number of mediocre schools, it seems likely that knowledgeable parents will flee the poorest schools, leaving behind children of poorly-informed parents. It is not clear how competition could improve these schools; nor is it clear how those left behind will benefit. However, under other circumstances, these theories could continue to predict improvements even if information disparities

PS 022913

exist. A theory based on competition could predict improvement in all schools, so long as a sufficient number of faculty in each school believed parents were well-informed. All that might be required is a critical number of visible, active and informed parents to produce competitive effects. A theory based on enhanced parental interest or reduced parent alienation likewise might predict improvements even if parents are poorly informed. Effects could depend simply on parents' perception of control over their child's education.

A third popular view is that choice is important not so much because it will make parents or schools behave better, but because it shifts certain decision-making to the best decision makers, who are parents. A choice program could allow parents to select schools that better suit the particular needs of their child, or better match the values taught at home. Many parents may regard this as a successful outcome, in itself.

Theories based on the importance of shifting decision-making to parents sometimes also predict enhanced academic outcomes, and sometimes better social and economic integration. Where school and home provide the same values, children receive a clearer message about discipline, hard work and related values, and this in turn may enhance academic outcomes. In another scenario, choice replaces a system in which a higher-income, better educated, usually white and elite population have already figured out, usually through their choice of residential location, how to isolate their children from lower-income children. Choice, under this theory, gives the disadvantaged families a better chance of attending the same schools as the advantaged family.

Under this theoretical approach, information inequalities are always critical. If choice allows a better match to a child's needs or values, or if it allows disadvantaged parents access to better schools, parents must choose knowledgeably to secure the desired results for their children. If parents choose schools haphazardly, or for reasons based on false assumptions, it seems unlikely that choice could lead to the hoped-for result.

Research does not allow selecting among these theories. Future research may help to clarify the way choice works, but meanwhile, one must remember to keep the argument about information inequalities in perspective. For the sake of further analysis, this paper will assume that parent information levels are an important aspect of school choice programs.

This paper also assumes a choice program that attempts to embrace all parents. Many do not. For example, under a typical open enrollment or magnet school policy, school authorities assign all children to neighborhood schools, and allow families to request a change. With such a policy in place, it seems more likely that choice will benefit only knowledgeable parents. If so, and if higher-income or better educated parents are more knowledgeable, then they will locate the best possible school for their children. Assuming that the schools serving the poorest children are the worst in the

district, then such a choice policy seems likely to allow better informed parents in those cachement areas to opt out, while the schools they leave deteriorate further.

Magnet programs, often adopted for racial balancing purposes, usually restrict choice by race to offset the imbalance that would otherwise ensue. To the extent that race and income and education are related, such restrictions will mitigate the effect of information disparities. Magnets, however, are vulnerable to the charges of "skimming" the most elite of the racial minorities eligible for transfer. The parent who doesn't have a clue still won't respond to the opportunities available.

In contrast, some choice programs, such as that in Cambridge, Massachusetts, require all parents to choose a school. In Cambridge, very few fail to do so. The administration assigns a small number of children to schools because no timely choice for them was on file. If Cambridge is the model for the future, then one must consider the consequences if some parents choose badly. If they choose randomly, then at least their children are randomly distributed throughout the system, and some of their children will be attending the best schools. If they choose nonrandomly, but using some criterion unrelated to educational outcomes[1] it is possible that their children will end up in the worst schools, academically, and that these schools will be segregated both racially and economically.

There are very little data available that directly confirms the presence or absence of information inequalities in school choice programs. Most studies rely on data about choice of schools, and infer parental knowledge from these data.[2] Alum Rock offers a rich source of data casting light on this issue. The program began in the 1970s as an ambitious experiment with education vouchers. However, lack of participation by private schools and other modifications converted it to a quasi-experimental design of a comprehensive public school choice policy. It looked somewhat like that used in

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[1]There is no example because I could not identify any plausible criterion that would be devoid of potential educational value. For example, parents do prefer schools closer to home, and many researchers have suggested that this is educationally irrelevant. But if closeness of child to home or work facilitates parents' participation in school programs and linkages among schools and families, or simply increases the time the parent may spend with the child, it may have educational benefits.

[2]Some recent research goes beyond this to some extent. For example, additional information on parents' informational levels, attitudes, beliefs and practices can be found in Frank H. Echols and J. Douglas Willms, "Scottish Parents and Reasons for School Choice," unpublished manuscript (1993?) (including data on parents informational sources and their beliefs); Other relevant work is found in James P. Tenbusch, "Parent Choice Behavior Under Minnesota's Open Enrollment Program," draft paper presented at the American Education Research Association (AERA), Atlanta, April 1992 (including data on parents' knowledge, their sources, and their beliefs); John F. Witte, "The Milwaukee Parental Choice Program: The First Thirty Months," paper presented at AERA, Atlanta, April 1992 (some information on parents' knowledge and beliefs).

Cambridge today.[3] Despite this modification, the district and the evaluators continued to call the choice policy in the first four years a "voucher" policy.

Alum Rock is an elementary school district serving grades K—8. During the period in question, it had 24 school buildings. Faculty within buildings formed schools-within-schools, or mini-schools, to increase the array of choices available. In Year 1, there were 22 minischools in 6 school buildings; in Year 2, 45 minischools in 13 buildings; in Year 3, 51 minischools in 14 buildings. In Year 5, the district abandoned comprehensive choice and converted to a limited open enrollment policy. Nine schools continued to offer more than one program within the school.

Alum Rock was, at the outset of the experiment, a racially and economically diversified school district. Slightly over half the students were Spanish-surnamed children; this grew to 57.2% in Year 5. Blacks remained more or less constant at around 11.5%. The numbers of "others" (including both whites and nonwhites) declined from 37.2% in year 1 to 31.3% in Year 5. The population trends, which had begun before the experiment, did not seem related to the experiment.[4] The evaluation included in-the-home surveys of samples of parent in Years 1, 2, 3 and 5 of the study. The evaluation team summarized their findings as follows:

> 1. Parents . . . vary widely in their awareness of their school alternatives and in the accuracy of their information about the rules governing choice. Specifically, information levels are higher among socially advantaged families, and parents' educational background is an especially important factor.
>
> 2. Over time, the differences between parents' information levels are reduced as parents gain more experience with the choice system, given that the rules of the system stay relatively constant.[5]

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[3]The evaluation of Alum Rock is found in R. Gary Bridge and Julie Blackman, A Study of Alternatives in American Education, vol. IV: Family Choice in Schooling (Santa Monica: Rand Corporation, April 1978). The Alum Rock program differed from Cambridge primarily in that families were given "squatter's rights" at the outset of the program. That is, a child was guaranteed a place in the school previously attended (along with younger siblings entering the system), and was not subjected to the lottery if the school was oversubscribed.

One source of information on Cambridge and other districts in Massachusetts can be found in Charles Glenn, Kahris McLaughlin and Laura Salganik, Parent Information for School Choice: The Case of Massachusetts (draft) (Boston, March 1993). As this study relies on data collected from parents who attended a parent information center it probably suggests higher levels of information than exist district-wide. In contrast, the Alum Rock study relied on a sample of parents interviewed in their homes.

[4]Demographic characteristics over time are shown in vol. 4, Table 157, at 157. The population declined from 15,403 to 13,851 during the five years studied.

[5]The Rand Report, at xiii.

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There are two reasons for going back over these old findings. First, they continue to be cited, usually incorrectly. It seems high time to set the record straight. Second, the original research team, which was working under considerable budgetary and scheduling pressures, and which had a vast array of issues to address, did not have time to present a thorough analysis of this small aspect of the study.

The original research team reported that, based on pooled data,[6] lower-income, less well educated and minority parents acquired less information than others. However, they also reported that the inequality in information disappeared over time. These findings get an interesting treatment in the secondary literature. Authors almost always fail to report the findings correctly. The source of their confusion may be due to the difficulty of obtaining a copy of the original evaluation report.[7] A more available source is Gary Bridge, "Information Imperfections: The Achilles' Heel of Entitlement Plans." Bridge, who was principal author of the original evaluation, wrote the article to focus on a broader issue than that presented in Alum Rock. He analyzed on how lower levels of knowledge about any program might limit the ability of individuals, especially low-income and less educated individuals, to choose intelligently in a dynamic market. The article is highly theoretical at some points; and contains some sophisticated and subtle arguments.

While the immediate purpose of his article was not to review the Alum Rock findings, Bridge summarized them clearly, including the finding that information inequalities disappeared over time. He concluded, based on a larger analysis, that in a dynamic market, lower-income individuals would always lag behind.[8] He did not define "dynamic" but he did carefully explain the context for Alum Rock: data existed on rule changes. They changed twice: in Year 1, when choice was first made available; and in Year 5, when the district replaced the comprehensive choice policy with a limited open-enrollment policy. Data were collected and analyzed to test parents' knowledge of these rules. There was also change in the number of available choices, but the researchers did not question parents about their knowledge of these changes. However, as will be seen, these market shifts had no apparent effect on parents' knowledge of the rules.

Subsequent articles relying on the Bridge article misuse it in various ways. Most typical is to report information inequalities without reporting any of the qualifications — usually these writers do not mention that the finding was true for only one of three

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[6]The pooled data included controls and a group of parents who were not yet entitled to choice at the time of the interview.

[7]It is available on microfiche in the ERIC system, Clearinghouse no. EA013780.

[8]Gary Bridge, "Information Imperfections: the Achilles Heel of Entitlement Plans, School Review, 86, 504--529 (1978).

questions, or that the inequality disappeared over time.[9] A number of articles seriously distort the findings. One commentator summarizes the data on parents' preferences for materials with a twist: "the better educated relied on printed materials and on visiting the schools and shopping around in true rational fashion."[10] Nothing in the original evaluation suggested that the better educated were "shopping around" and the conclusion that they were more rational has no obvious basis.[11] Another researcher incorrectly reported that "Researchers at Alum Rock found persistent differences in information levels based on socioeconomic status and race/ethnicity, which decreased but did not completely disappear during the five years of the voucher demonstration."[12] As over 97% of all eligible parents were aware of the program by their 14th month of eligibility (See Table 1A), there was simply no room for significant or substantial differences among subgroups of parents. Ultimately, in an article titled "Information Access Inequities: A Fatal Flaw in Educational Voucher Plans," an author actually reverses the findings on the effects of time. According to this erroneous article, "discrepancies increased over the length of the [Alum Rock] program."[13] The "Achilles Heel," which Bridge thought might be corrected by armored shoes,[14] thus became a "Fatal Flaw."[15]

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[9]E.g., Ross Zerchykov, Parent Choice: A Digest of the Research (Boston: Institute for Responsive Research, 1987) 96--97 (no indication statement is true only for one question); Mary Anne Raywid, "Restoring School Efficacy by Giving Parents a Choice," Educational Leadership, 38 (2), 134 (1980), at 137 (no qualifications); Center on Families, Schools, Communities and Children's Learning, Proposal to the Office of Educational Research and Improvement, June 15, 1990, at 96 (no qualifications).

[10]Zerchykov, at 96--97 (emphasis added).

[11]Zerchykov also reported that "The less well-educated relied on word of mouth from their peers or on contacts with a trusted teacher." Actually, for this group, the order of preference was school publications (29.7%); "other sources" (25.4%), parent counselors (23.7%) and last of all, teachers (20.1%). Rand Report, Table 10, at 40.

[12]J. Maddaus, "Parent Information About Their Options for Choice: What do Parents Think and Do," in C.B. Cazden, ed., Review of Research in Education (Washington D.C.: American Educational Research Association, 1990), 267--95, at 285.

[13]Michael A. Olivas, "Information Access Inequities: A Fatal Flaw in Educational Voucher Plans," Journal of Law and Education, 10 (no.4), 441--65, at 456 (1981) (emphasis added).

[14]Bridge, at 525.

[15]Other examples abound. One secondary report tells us the program significantly increased segregation. Michael W. Spicer and Edward W. Hill, "Evaluating Parental Choice in Public Education: Policy Beyond the Monopoly Model," American Journal of Education, 98(2): 97 (1990), at 106. Compare with findings from the Rand Report, at 147 (small increases in ethnic and socioeconomic imbalance among schools and programs) and 157 (for ethnic imbalance at schools: "Data from the 1970--76 period [two years prior to and including the years of the experiment] do not show any trend toward increased ethnic imbalance among schools because of the voucher demonstration."

Minor additional manipulation of data (to the extent that data can be extracted from published tables) is possible, and allows limited reanalysis. Based on this reanalysis, data were mixed even in the first year, and the disappearance of informational inequalities occurred prior to the fourteenth month of the experiment. There is also evidence to suggest that inequalities in information may lessen once a parent is actually eligible for a program; that is, once the information is no longer about a plan, but is information to be acted on, all parents became more knowledgeable.

Three key questions in the survey elicited data on parents' information about the choice program. Two of the questions, which were modified from year to year, are as follows:

> 38. Have you heard about the [voucher or open enrollment] plan that has started in the schools here in Alum Rock?[16]
>
> 48. As far as you know, under the [voucher or open enrollment] system, if a parent wants to send his child to a school that is not in his own neighborhood, does the parent have to provide transportation himself, does the child use city buses, or is transportation provided free of charge?[17]

The third question (no. 55) is no doubt a variation on the following:

> 110. As far as you know in the school system here in Alum Rock, do parents have the right to request that their children be transferred from one school or program to another?[18]

Three factors unrelated to parents' socio-economic status that influenced whether or not a parent was knowledgeable on these questions included: 1) having an entitlement, 2) duration of entitlement, and 3) the type of program that was available, comprehensive choice (Years 1–3) or open enrollment (Year 5).

At any given time, parents who were actually entitled to a choice of schools were more knowledgeable than parents who were not. There were three groups of parents in the survey. One group received "vouchers" — that is, were entitled to choose schools — in the first year of the experiment (called the "old" voucher parents). The second group received vouchers in the second year (the "new" voucher parents). The third group consisted of a control group. The control group also became entitled to choice of schools in the fifth year, when the district turned to a limited open enrollment policy.

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[16]Rand Report, at 126.

[17]Rand Report, at 136.

[18]Rand Report, at 132.

Table 1 shows a powerful relation between eligibility for the program and knowledge. All of the schools had minischools, or separate programs, so all of these parents had choosen among programs, regardless of whether they understood a voucher plan was in place. The interviews took place in the fall, only a few months after the school year began, and only about six months after information dissemination efforts began. In the first year, 82.5% of the participants said they knew about the program. In contrast, less than half of the ineligible parents knew about the program. The parents first entitled in Year 1 did not do as well on the other two questions. However, almost half of them knew about their transportation and transfer rights. In contrast, all other parents had much lower information levels on all three questions.

By Year 2, 96.3% of the experienced parents (the "old" voucher group) knew that the program was in place; 72.3% knew transportation was free; and 66.7% knew about their transfer rights. The old voucher parents in Year 1 all had to choose, although many chose among programs within the local school building. Of the 82.5% of these parents who did know about the voucher program in Year 1, 25% could not remember, two months later, which program they had chosen; by Year 2 they were more knowledgeable.[19]

The "new" parents, those who received a voucher for the first time in Year 2, had been even less knowledgeable in Year 1 than the controls. Only 40.9% of this group knew about the program, and less than a quarter of them knew about the transportation and transfer rights of parents in the program. However, the year they became eligible, they became more knowledgeable than the older voucher parents had been in their first year, on all three questions.

Sometime between the first and second interviews of eligible parents, general information levels approached 100%; transportation knowledge moved above 80%; and knowledge about transfer rights edged up somewhat for eligible parents. Information levels of the controls also improved considerably, but still lagged behind the levels of parents who actually had an entitlement.

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[19]Daniel Weiler, A Public School Voucher Demonstration: The First Year at Alum Rock (Santa Monica: Rand Corporation, 1974), p. 19. The evaluators reported only on knowledge about rules for Year 2. Presumably, knowledge about which program a child was in improved sufficiently to render it not important enough for further reporting.

Table 1
Parents aware of Choice by Program Year, Experimental Assignment, and Months of Entitlement in Program

Parents knew about: choice program	transportation	transfer rights			
YR	group	Month in Prog.	% (freq./N)	% (freq./N)	% (freq./N)
1	new	0	40.9% (99/242)	19.8% (48/242)	26.4% (64/242)
1	control	0	50.6% (88/174)	24.7% (43/174)	24.1% (42/174)
2	control	0	48.6% (35/72)	38.9% (28/72)	30.9% (17/55)
3	control	0	75.4% (101/134)	47.8% (64/134)	67.5% (54/80)
			$X^2 = 41.7$, $p < .001$	$X^2 = 37.4$, $p < .001$	$X^2 = 54.6$, $p < .001$
1	old	2	82.5% (495/600)	48.3% (290/600)	47.7% (286/600)
2	new	2	91.8% (539/587)	71.6% (420/587)	63.9% (375/587)
5	old	2	42.0% (113/269)	59.1% (159/269)	
5	new	2	38.3% (111/290)	58.0% (167/288)	
5	control	2	45.7% (123/269)	36.3% (97/267)	
			$X^2 = 477.7$, $p < .001$	$X^2 = 115.5$, $p < .001$	$X^2 = 31.6$, $p < .001$
2	old	14	96.3% (309/321)	72.3% (232/321)	66.7% (214/321)
3	new	14	98.6% (206/209)	85.2% (178/209)	69.4% (145/209)
			$X^2 = 2.4$, n.s.	$X^2 = 12.0$, $p < .001$	$X^2 = .4$, n.s.

Notes: "YR" in column 1 refers to the year of the choice experiment; "Month" in column 3 refers to how long a parent was entitled at the time of the interview. Thus, in Year 1 of the experiment, the "new" parents were not yet in the program, and "month" is 0. The "old" group had been in the program for approximately 2 months when interviewed. In Year 2 the "new" group had been entitled for approximately 2 months and the "old" group for 14 months when interviewed. In Year 5, which has been shaded, the rules changed and all families were eligible for limited open enrollment, and all had approximately two months experience under this policy when the interview took place. Interviews were in October and November. See Rand Report, at 20.

Source: Rand Report, Tables 2, 3, 4 and 5, at 32–33; and Bridge, Table 4, at 519.

Modifications to Source data: For Year 2, for the question about choice program, for parents with one year in the program, the number in the source was 439 and the percentage 91.8%; I assumed the percentage was correct and corrected the number. For the transportation question, Year 1, the source table used the number who were aware as N to calculate percentage. This was not done in subsequent years, nor was it done for the transfer rights question in Year 1. Where missing, frequencies were computed based on percentage from the source and total number of interviews (from Rand Report, Table 2, at 21).

Table 1A
Parents aware of Choice by Month in Program
Pooled Data

Parents knew about: choice program	transportation	transfer rights
By Month in Program	% (freq./N)	% (freq./N)	% (freq./N)
0	51.9% (323/622)	29.0% (183/632)	32.1% (177/551)
2	68.5% (1381/2015)	56.3% (1133/2011)	55.7% (661/1187)
14	97.2% (515/530)	77.4% (410/530)	67.7% (359/530)
26	96.2% (150/156)	82.7% (129/156)	67.9% (106/156)
	$X^2 = 341.9$, $p < .001$	$X^2 = 330.3$, $p < .001$	$X^2 = 159.8$, $p < .001$

Source: Table 1 in this paper, and, for parents 26 months in the program (the "old" voucher parents in Year 4), Rand Report, Tables 3, 4 and 5, at 32–33.

Table 1A pools data by months of entitlement. If one compares all parents with no entitlement with those with just two months of entitlement on basic knowledge of the program, information levels are 51.9% and 68.5% respectively — a significant difference.[20] This difference may be due to the mere fact of eligibility; it may be due to the two months of experience as an eligible parent; or it may be due to the six months of information dissemination efforts aimed at these parents. The difference between parents with 2 and 14 months experience is both large and significant[21] — 68.5% compared to 97.2%. However, the difference between parents with 14 and 26 months experience is not significant.[22] This allows us to more specifically target the point at which information inequalities disappear to between the second and fourteenth months.

The Year 5 change to a limited choice plan also had a powerful effect. Parents

[20] $X^2 = 57.33$; $p < .001$.

[21] $X^2 = 181.1$; $p < .001$.

[22] $X^2 = .4$.

entitled under the voucher program showed high general knowledge levels (e.g., 82.5% for Year 1 voucher parents and 91.8% for Year 2 "new" voucher parents). However, in Year 5, when all parents became eligible under an open enrollment policy, all knowledge levels dropped to below 50%. This drop represents more than a response to new rules, since knowledge is much lower than it was among eligible parents receiving a voucher for the first time in earlier years. The effect may be due to a reduced level of effort in information dissemination in the district.

A separate analysis was made of the three groups for Year 5 — represented by the shaded area in Table 1. The differences between these groups — all of which were experiencing their first year with a new set of rules under the open enrollment plan — were not statistically significant on the basic question about knowledge of a choice plan.[23] However, for the transportation question, differences were significant, with the parents who had prior choice experience (the "old" and "new" voucher parents) having a noticeable information advantage over the group that previously had "control" status.[24]

Table 1A also illustrates how substantial the differences are among parents over time and highlights the finding that most parents gained their information about the program between the second and fourteenth month of eligibility. Only 51.9% of parents who had no entitlement to choice knew about the choice program; 68.5% of entitled parents knew about it in their first year of entitlement; 97.2% of entitled parents knew by their second year in the program; and 96.2% knew by their third year in the program. Knowledge of transportation and transfer rights display similar patterns.

The discussion thus far has been about general trends among all parents. The more important question is whether socially advantaged parents have higher information levels than other parents. Parents were not randomly assigned to the Year 1 or Year 2 voucher groups or to a control group, and these groups differed in ethnicity, income and education. The published evaluation does not provide a breakdown of the knowledge levels by eligibility status or years of eligibility and by ethnicity, income or education. However, the knowledge levels shown in Table 1 for all parents provide clues. For example, where knowledge levels are approaching 100% one must assume that poor, minority and less well educated parents (all of whom were present in substantial numbers) were demonstrating high levels of knowledge about the program.

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[23] $X^2 = 3.181$; $.05 < P < .1$.

[24] $X^2 = 35.67$; $p < .002$.

Table 2 provides the results of pooled data as presented in the original Rand report. It is important to note that even under this procedure, the findings are mixed. As reported by Rand:

- o Education and income were positively related to awareness of the choice system (Q38) but not to information about busing (Q48) or transfer rights (Q55B).

- o Ethnicity was related to awareness of the system (Q38) but nothing else. Anglos and blacks tended to be the most aware of the choice system.[25]

In short, only one of the three questions indicated that higher-income parents were more knowledgeable. Only one question (the same question) indicated that whites were more knowledgeable than the Mexican Americans and the catch-all minority group called "other." Blacks showed high levels of knowledge on all three questions.

In addition, Table 2 reveals that Mexican-Americans in the Spanish interview were more knowledgeable about their transfer rights, compared to any other ethnic group. The probability of this happening by chance is less than one in a thousand. These Spanish speaking parents were also more knowledgeable about their transportation rights, a finding that is statistically significant when they are compared with all other ethnic groups on an aggregated basis.[26]

The research team discounted the apparent superior knowledge of the Spanish speaking group. In the written report, the justification was based on the fact that more parents in this group knew that they could transfer their child than knew that there was a voucher (or open enrollment) plan in place. The research team reasoned that it was necessary to know about the choice plan before one could know about transportation or transfer rights.[27]

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[25]Rand Report, at 35.

[26]This particular finding is based on the reanalysis done for this paper. In all the English-speaking interviews, 1621 out of a total of 2657 parents knew about their transportation rights (61% of the total); and 241/354 (68%) of the Spanish-speaking parents. $X^2 = 6.61$; $p < .01$.

[27]Rand Report, at 35, n. 1.

Table 2
Parent Knowledge By Ethnicity, Education, and Income
Four year pooled data including controls and ineligible parents

parents knew about:	choice program	transportation	transfer rights
	% (freq./N)	% (freq./N)	% (freq./N)
Anglo	78% (799/1024)	60% (583/972)	51% (398/780)
Black	75% (258/344)	63% (200/317)	50% (129/258)
other	63% (228/362)	59% (191/324)	51% (125/245)
Mexican-Am. Engl.int.	69% (836/1212)	62% (647/1044)	50% (478/956)
Mexican-Am. Spanish int.	63% (260/413)	68% (241/354)	68% (180/265)
	$X^2 = 53.5$; $p < .001$	$X^2 = 8.4$; n.s.	$X^2 = 29.4$; $p < .001$
no hs diploma	66% (1217/1844)	61% (966/1584)	52% (731/1406)
hs diploma	76% (645/849)	64% (505/789)	51% (322/631)
some college	79% (517/654)	63% (390/619)	54% (254/470)
	$X^2 = 53.1$; $P < .001$	$X^2 = 2.2$; n.s.	$X^2 = 1.0$; n.s.
<$7500	67% (768/1146)	62% (612/987)	52% (469/902)
$7500-9999	71% (397/559)	66% (323/489)	53% (234/442)
$10000-14999	78% (672/862)	63% (510/810)	54% (370/685)
>$14999	71% (415/585)	59% (325/551)	48% (166/346)
	$X^2 = 29.4$; $P < .001$	$X^2 = 5.6$; n.s.	$X^2 = 3.5$; n.s.

Notes: The percentage and frequency are from the Rand report, table 6, at 34. N was calculated. Rand used a chi squared test to determine probabilities.

This justification does not seem adequate. If the interview were to blame, the fault could as well have been in the first question and not in the second and third questions. In the first four years the first question asked for knowledge about a "voucher plan." There is no good Spanish translation of this term, and even in English it was a newly constructed term with little initial meaning to most parents.[28] It seems likely that the English terminology would gain coinage more rapidly, as the idea originated among English-speaking individuals.

In short, parents responding in Spanish may have been responding to differences in the concreteness and familiarity of the questions. One might say "no" to a question about a "voucher plan" and "yes" to more concrete questions about one's right to transfer to another school and to receive free busing. In fact, this pattern appeared in Year 5 for all parents.[29] The research team did not speculate that there was something wrong with the fifth year questionnaire. In the fifth year, parents were asked about their knowledge of an "open enrollment plan." Perhaps some parents were confused about the new language, although they continued to understand that they could transfer their child and obtain free transportation.

Researchers also discounted the superior knowledge of the Spanish-speaking Mexican Americans because they suspected possible bias due to the fact that the parent counselors and the interviewers were mostly the same.[30] This could pose serious problems to the validity of some questions. In effect, a parent counselor who was also an interviewer could provide small nonverbal clues guiding the interviewee.[31] This does not explain why the clues were not taken on the question about a program in place, however. Nor does it explain the similar pattern for other parents in Year 5.

It seems plausible that the interview results accurately reflect higher information levels for Spanish-speaking parents on some questions. These parents relied on a somewhat different array of information sources, and specifically, they relied on parent counselors more than other groups did. Possibly, counselors stressed the concrete

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[28]To make matters worse, the plan in Alum Rock was arguably not a "voucher" plan, so that a "no" would have been more sophisticated than a "yes" on this question.

[29]Of old voucher parents, 42% knew about the open enrollment policy while 59.1% knew about transportation rights. Similarly, 38.3% of new voucher parents knew about open enrollment while 58% knew about transportation.

[30]Gary Bridge, letter of July 30, 1993.

[31]The research team also discounted the Spanish interview when analyzing parental satisfaction. Rand Report, pp. 80--81. Spanish speakers and Anglos were the most satisfied groups. Clearly, a parent counselor who also interviewed a parent was, in effect, asking the parent to evaluate the counselor's work.

aspects of the plan — the rights to transfer and to transportation, for example.[32] It is entirely possible for an individual to be unsure of the existence of a program or plan (especially if it is called a "voucher plan"), while being sure that specific, concrete rights are available.

Table 2 also shows some mixed results on awareness by income, with the second most affluent group being more aware than the most affluent group on the first question. On the second and third questions the most affluent parents were the least aware group, but the differences were not statistically significant. The differences by education favored better educated groups, but they were small, and significant only on question 1.

Table 2 provides pooled interviews over the four years of interviews, and included control parents. Thus, these findings did not take into account the effect of experience with the program. The report does not explain the rationale for this procedure. Researchers were faced with small cell size within years and groups, and the pooled data did allow the identification of significant differences among groups.

Given the evidence that parents became significantly more knowledgeable if eligible for the program, and after a year of experience with the program, it would make more sense to pool data by month of entitlement. Limited disaggregation of data was possible, as shown in Tables 3 and 3A. There is no problem with small cell size under this grouping of the data. Under this limited reanalysis, the significant differences by ethnicity and education remained on the first question in the first year.

Table 3 shows the pooled data for eligible parents only, and Table 3A shows data by year of program, to the extent that published reports allow disaggregation of this data.[33] Table 3 shows that if one examines eligible parents only, differences by ethnicity and education persist on the one question where Anglos and better educated parents demonstrated a superior level of information. Table 3A shows that even these differences disappear sometime prior to the 14th month of the program. In fact, in Year 2, Blacks were most aware, with 100% awareness. The position of the lowest scoring group in Year 2, the Spanish-speaking Mexican Americans, could easily be by chance, even if all other groups are aggregated.[34] Among the remaining categories of parents — parents with two months experience or more in the remaining years of the experiment —

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[32]See the discussion at note 48 and accompanying text.

[33]The published data impose restrictions on what one can examine. A large number of Year 2 interviews are missing; the number shown in Table 3A most closely matches the "old" voucher group, but even here interviews are missing. A second problem is the aggregation of "Anglo" and "other" in the "White" category.

[34]The average for all other groups would be approximately 97% compared to the average for this group at 92%. $X^2 = 1.65$.

Table 3
Parent Knowledge by Ethnicity and Education
Eligible Parents Only
Pooled Data from 4 Years

	% (freq./N)
Anglo	79.9% (664/831)
Black	74.6% (223/299)
other	66.6% (201/302)
Mexican-Am. Engl. int.	74.8% (702/938)
Mexican Am. Span. int.	67.2% (244/363)
	X^2 = 32.9; p<.001
no hs diploma	71.4% (1074/1504)
hs diploma	78.6% (547/696)
some college	80.0% (421/526)
	X^2 = 22.2; p<.001

The frequency of response is from the Rand Report, Table 7, at 37 and appears to be based on responses to the question concerning knowledge of a choice plan in place in Alum Rock. The source table excluded parents interviewed in Year 1 before they became eligible for vouchers, and the control group in Years 1–3. In Year 5 the control group was eligible for the open enrollment opportunities on the same basis as others and was included. See Rand Report, at 36. The total number of parents interviewed, by ethnicity and education, is computed based on Rand Report, Table 2, at 21.

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Table 3A
Parent Knowledge by Program Year - Eligible Parents Only

Year 1			
Anglo+others	89.9% (240/267)	no hs diploma	73.2% (240/328)
Black	86.2% (56/65)	hs grad or more	93.8% (255/272)
Mexican-Am. English int.	78.1% (143/183)	$X^2=43.62$, $p<.001$	
Mexican-Am. Spanish int.	65.9% (56/85)		
$X^2=29.36$, $p<.001$			
Year 2 (Old Voucher Parents only?)			
Anglo+others	95.2% (120/126)	no hs diploma	95.0% (153/161)
Black	100.0% (27/27)	hs grad & up	98.4% (123/125)
Mexican-Am. English int.	98.2% (106/108)	$X^2=2.36$, n.s.	
Mexican-Am. Spanish int.	91.7% (23/25)		
$X^2=4.22$, n.s.			
Remainder of Year 2, and Years 3 & 5			
Anglo+others	68.2% (505/740)	no hs diploma	67.1% (681/1015)
Black	67.6% (140/207)	hs grad & up	71.5% (590/825)
Mexican-Am. English int.	70.0% (453/647)	$X^2=4.17$, $p<.025$	
Mexican-Am. Spanish int.	65.2% (165/253)		
$X^2=2.02$, n.s.			

Year 1 and 2 data are from Daniel Weiler, A Public School Voucher Demonstration: The First Year at Alum Rock (Santa Monica: Rand Corporation, 1974), tables 6.17 and 6.18, at 120 & 121. For Year 2, the number of interviews does not match the total number of parents interviewed, as reported in Rand Report, Table 2, at 21. The closest match is with the old Year 2 voucher parents although some interviews still appear to be missing. The last set of comparisons were derived by subtracting years 1 and 2 from pooled data in Table 3.

the English-speaking Mexican-Americans were the most aware ethnic group, but the differences are not significant.[35] It is possible but not probable that disaggregation of Anglos and others would show that Anglos were more aware.[36]

Parents with more education consistently showed greater awareness than those with less. However, among parents interviewed in Year 2 as shown on Table 3A the difference was small, and was not statistically significant. Other aspects of the Alum Rock experiment suggest that minority parents were informed and actively making decisions. For example, a larger percentage of Blacks used the voucher opportunity to choose more distant schools, compared to any other group.

Second, parents with different economic and education backgrounds chose different kinds of programs. As a result, a "traditional" classroom would have 40% of its children from the higher-income group; while an "open" program would have 64% of its children from this group. The traditional classrooms were composed 39% of children whose families spoke some language other than English at home, compared to 15% for the "open" classrooms.[37] These enrollment patterns reflected parents' preferences. For example, the Spanish speaking Mexican Americans tended to prefer a narrower curriculum content; whereas others favored a broad curriculum. Parents with less than a high school education tended to choose more "strict" schools "where students were always well-behaved" while better educated parents preferred "free schools where students could act naturally." Blacks, Anglos and the English-speaking Mexican-Americans tended more toward the "free schools" than did Spanish-speaking Mexican Americans and other minority ethnic groups.[38] These trends suggest that these parents were exercising choice knowledgeably.

Finally, the more serious consequences of information inequalities did not materialize. Parents did not sort themselves out by race. While the data can be interpreted differently, it appears that there was little or no impact on racial balance in

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[35]The remainder category, includes, for example, the former controls who were eligible for open enrollment in Year 5.

[36]It is possible that Anglos also scored 100%, but only if the "others" were considerably less aware than average. If all of the missing interviews are imputed to Anglos, and all six unaware parents (in the Anglo and other group combined) are imputed to "others" one arrives at the worst possible score for "others," 81%. Since the others in the pooled data did about as well as the Spanish-speaking Mexican Americans, this imputation is probably incorrect. If others scored anything above 81%, then Anglos must have scored less than 100%.

[37]Rand Report, Table 18, at 56. Data from Mamaroneck, New York revealed similar trends, although differences were even less substantial.

[38]Rand Report, at 53.

schools buildings.[39] A measure based on the percent of students who would have to be transferred to achieve identical ethnic distribution in all schools showed improvement in racial balance during the experiment, compared to the two years prior to the experiment.[40] To the extent that there was a slight imbalance in minischools[41] the imbalance seems to be due to the presence of a Spanish language or Hispanic cultural emphasis in some minischools.[42] The data show a small effect on socio-economic balance within minischools. The socio-economic imbalance was even less marked than the racial imbalance and appeared to be due to socio-economic differences among neighborhoods.[43] The preferences of parents for a traditional discipline-oriented approach or more open classrooms was not sufficient to create segregated programs under the criterion used. The criterion for segregation allowed deviations of up to 15% of the district-wide ratio for a racial or socio-economic group.[44]

This does not mean that information inequality will never be a problem. It may be that the reduction in information inequality by the fourteenth month was due to Alum Rock's commitment to dissemination of information about the program. As a prime example, the parent counselors represented an unusual and expensive feature. This may have been particularly important in boosting the information levels of the Spanish-speaking parents. The sharp reduction in information levels of all parents in the fifth year, when the district limited choices, also suggests a possible reduction in information dissemination efforts.

Some practical findings from the experiment are worth repeating. The research probed parents' informational sources. Official school publications were the single most

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[39]Once again one must carefully read the Rand Report which reports "small increases in ethnic and socio-economic imbalance among schools and programs during the course of the experiment." This included increases among nonvoucher schools. Rand Report, at 147. Prior to the experiment, the number of imbalanced schools was 8 schools in 1970 and 9 in 1971 out of 24 schools. Table D.4. During the experiment, the highest number of imbalanced schools was 9 out of 25, in the fourth year, 1975. In the fifth year, the number was 5. Racial imbalance both increased and decreased in both voucher and nonvoucher schools. The final conclusion was that no trend toward ethnic imbalance occurred. Rand Report, at 157.

[40]Rand Report, table D.3, at 158. In 1970 13.3% of the students would have had to be transferred; in 1971, 12.3%. In the first year of the experiment (1972), this dropped to 11.1%; to 10.7% in 1973. It increased to 11% in 1974 and to 11.7% in 1975, and dropped back to 11% in 1976.

[41]Rand Report, Table D.5, at 160 shows that 11.5% of students would have to be transferred to another program in 1973. This increased to 11.9% in 1974; 12.6% in 1975 and 12.9% in 1976. In dropped back to 11.6% in 1977. These percentages were somewhat larger prior to the start of the experiment.

[42]See Table D.7, at 163.

[43]Rand Report, at 164--65.

[44]This was the California requirement at the time of the experiment.

used source of information, with 93.6% of all aware parents naming it. The next most-named source was "special school bulletins," a very similar category, with 60.5% of the parents naming it. Next in order came "talks with teachers and principals" (53.1%); "talks with parent counselors" (45.2%) and "talks with friends and neighbors" (43%).[45] When parents were asked to name just one "best source of information" about 30% named "school publications" and 22% named "parent counselors" and another 22% named "teachers and principals."[46]

Some groups displayed a somewhat different pattern in their preferences for sources of information. While most prefer official, written sources, a few preferred word-of-mouth. Other research also suggests that word-of-mouth communication may be important to some groups of parents.[47] In Alum Rock, parents preferred school publications, regardless of ethnicity, with two exceptions. The Spanish-speaking Mexican Americans preferred parent counselors. Blacks were evenly divided between parent counselors and school publications.[48] These exceptions did not persist where education was held constant. For example, Spanish speaking parents with some college education preferred the school publications.[49]

All parents, regardless of education, listed school publications more frequently than any other source as their best source of information.[50] Of those with less than a high school education, 29.7% preferred these publications; 30.1% of those with a high

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[45]Rand report, Table 9, at 39.

[46]Rand report, at 39.

[47]Although the method of disseminating information on before- and after-school programs was not a focus of a study of such programs, evaluators identified as most successful a neighborhood-based program that recruited through word of mouth. The children were primarily Hispanic, and attended both public and private elementary schools. Patricia S. Seppanen, John M. Love, Dianne Kaplan deVries, and Lawrence Bernstein, National Study of Before- and After-School Programs (Washington D.C.: RMC Research Corporation, 1992) (prepared under U.S. ED Contract no. LC 89051001), at 136. However, researchers attributed the communication method to success, and not success to the communication method: "The program is so established in the neighborhood that recruitment has become word-of-mouth."

A study of nursing mothers learned 95% of the women heard of program by word of mouth, despite an extensive media campaign. Bendick, Campbell, Toby, Bawden, Lee & Jones, Towards Efficiency and Effectiveness in the WIC Delivery System (1976).

[48]Rand Report, Tables 10 & 11, at 40.

[49]Rand report, at 41.

[50]Unfortunately, the original Rand Report has some vague textual language that indicates that higher educated parents were more likely to rely on publications. This is true, but all parents nonetheless named publications first. The higher educated group simply did so in greater numbers. Rand Report, at xiii & 42. This paper relies on the more specific data reported in tables.

school education and 35.0% of those with some college preferred them. The major difference was in the next most frequent preference. Those with some college preferred teachers (26.7%) while 20 to 21% of the other two groups preferred teachers. Conversely, only 16.4% of those with some college preferred parent counselors; while approximately 24% of less well educated parents preferred talks with the counselors.[51]

Rand found that "aware"[52] parents used an average of four different sources of information to learn about the system. The differences between groups was statistically significant, but not large; the Anglo average was 4.34; for Blacks, it was 3.8; for others, 4.10; for Mexican-Americans (English interview), 4.10; and for Mexican-Americans (Spanish interview), 3.49. Differences by education were likewise not large: aware parents with less than a high school degree used 3.93 sources; those with a high school degree used 4.1 sources; and those with some college, 4.39 sources.[53]

On the whole, this reanalysis is a hopeful one. It strongly suggests that where a school system makes an effort to reach all parents, it can have a reasonable degree of success, at least for simple and concrete information. It suggests that most parents do possess the basic skills required to receive the information, and that they are interested in receiving it. This should hold true for efforts to reach parents for any number of programs that require parental involvement. It also strongly suggests that rules should be held constant to preserve informational equality.

If parental involvement is a key to improvement in the education of the child, then the question is not between providing choice or not, but whether choice is the best way to encourage the best kinds of parental involvement. If it is, and if informational inequalities do exist, then a district should adopt choice policies, but only after adequate parental information dissemination programs are in place.

The results from Alum Rock also suggest some common sense rules for running the program. First, as there is some evidence that disadvantaged parents require a longer time period to assimilate the rules of a program, dissemination efforts should target them first. New residents identified as disadvantaged should also be targeted for special outreach. Third, stability is a goal: the rules should not be changed without compelling reasons. These steps would help avoid the appearance of information inequalities.

Research continues to play a role in assessing the problems and their solutions.

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[51]Rand Report, Table 10, at 40.

[52]This appears to refer to those responding correctly on the first question, asking whether the parent knew a "plan" had been implemented.

[53]Rand Report, Table 7, at 37.

Future research could address several important aspects of this issue:

It should be possible to more accurately pinpoint the time it takes disadvantaged parents to become as knowledgeable about the program. One or two intermediate interviews between the second and fourteenth month of a new program would shed additional light on this question of time needed to equalize informational levels.

It would be useful to examine more closely why disadvantaged parents appear to require more time to assimilate the information on a new program. Additional questions about their preferred information sources and how the access them may assist in this effort.

Future research should address acquisition of more complex information. What do parents know about teachers in the school, their experience, and their teaching styles? What do parents know about the curriculum and textbooks?

Are there less expensive substitutes for the parent counselors? It would be useful to compare such an intensive effort with efforts that are used more routinely in public school choice plans.

Are there more successful approaches to written communication? What effect does the use of illustrations and simplified language have on information acquisition by disadvantaged parents? The recent work of the Center on Families, Communities, Schools and Children's Learning reveals a wide variety of new approaches in place to reach parents, including videos, telephone hot-lines, meetings, newspapers, and so on.[54]

If sufficient data are gathered on the many experiments with choice that are now going forward, we will learn more about the differences among parents with different incomes, education or ethnicity.

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[54]Laura H. Salganik and Rebecca L. Carver, Information About Schools of Choice: Strategies for Reaching Families, report no. 5 (Boston: Center on Families, Communities, Schools and Children's Learning, March 1992), condensed and republished as Carver and Salganik, "You Can't Have Choice Without Information," Equity and Choice 7(nos 2&3):71--75 (Spring 1991).